

REMARKS

The office action dated February 2, 2005 has been reviewed. Independent claims 1, 17 and 33 have been amended to basically correspond in scope to dependent claims 10-11, 26-27, and 42-43. Dependent claims 10-11, 26-27, and 42-43, as well as claims 49-70 have been cancelled. Claims 6, 22 and 38 have been amended to conform to 35 USC § 112, second paragraph. Claims 12-14, 28-30, 37 and 44-46 have been amended to correct the dependencies of such claims. Independent method claims 71 and 72 have been amended to correspond more to the independent product claims 1, 17, and 33, as amended. In view of the following remarks, it is Applicants' belief that the above-referenced patent application is in condition for allowance.

Rejections under 35 U.S.C. §102

Claims 6, 22, 37, 38, 43-46, 53, 54 and 59-62 were rejected under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants' regard as their invention.

As discussed above, claims 43, 53, 54, and 59-62 have been cancelled. Thus, the foregoing rejections have been rendered moot for these claims.

Claims 6, 22, and 38 were more specifically rejected based upon the premise that the language "does not require any significant power or communication infrastructure" fails to provide clear and distinct limitations to the

claims. Claims 6, 22, and 38 have been amended to overcome the rejection under 35 USC § 112, second paragraph. That is, the word “significant” has been removed from claims 6, 22, and 38. It is believed that the scope of claims 6, 22, and 38 is clear based upon the description in the specification, e.g., see paragraph [0035].

Claims 37 and 44-46 were more specifically rejected as not being clearly written in light of the dependence of such claims on improper parent claims. The rejection of claims 37 and 44-46 is regrettably acknowledged. The Applicants’ attorney appreciates the Examiner noting that the dependencies of these claims needed to be amended. The dependence of claims 37 and 44-46 have been amended to overcome the rejection under 35 USC § 112.

In light of the foregoing, it is Applicants’ belief that the rejections under 35 USC § 112, second paragraph have been overcome. Reconsideration and withdrawal of the rejection of claims 6, 22, 37, 38, and 44-46 is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-72 were rejected under 35 USC § 102(a) as being anticipated by FAA-E-2937A. Claims 1-72 were rejected under 35 USC § 102(b) as being anticipated by Swider et al. Claims 1-16 and 68-72 were rejected under 35 USC § 102(b) as being anticipated by Murphy (U.S. Patent No. 5,786,773).

As discussed above, claims 10, 11, 26, 27, 42, 43, and 49-70 have been cancelled. Thus, the foregoing rejections have been rendered moot for these claims.

The remaining independent product claims, i.e., claims 1, 17, and 33 have been amended to basically correspond in scope to dependent claims 10-11, 26-27, and 42-43. The remaining independent method claims 71 and 72 have been amended to correspond more to the amended product claims 1, 17 and 33.

As the Examiner correctly noted, Applicants' were not the first to develop a local area augmentation navigation system. In this regard, FAA-E-2937A, Swider et al. and Murphy (U.S. Patent No. 5,786,773) describe local area augmentation navigation systems. Further, FAA-E-2973A, Swider et al. and Murphy all discuss some type of monitoring of the broadcast for purposes of error correction and data integrity. However, none of these references either teach or suggest a security receiver and an evaluation computer cooperating to monitor other broadcasts in the area for unauthorized broadcasts having a similar character as the correction message broadcast by the master station. Further none of these references teach or suggest the outputting of an alert signal upon detection of an unauthorized broadcast. Moreover, none of these references teach or suggest a security receiver and an evaluation computer wherein the evaluation computer receives the correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security

receiver does not match the correction message broadcast by the master station.

Independent claims 1, 17 and 33, as amended, as well as independent claims 71-72, as amended, recite these differences as listed below:

a security receiver and an evaluation computer cooperating to monitor the broadcast of the correction message by the master station, **to also monitor other broadcasts in the area for unauthorized broadcasts having a similar character as the correction message broadcast by the master station, and to output an alert signal upon detection of an unauthorized broadcast, wherein the evaluation computer receives the correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station** (independent claim 1)

a security receiver and an evaluation computer cooperating to monitor the broadcast of the correction message by the master station, **to also monitor other broadcasts in the area for unauthorized broadcasts having a similar character as the correction message broadcast by the master station, and to output an alert signal upon detection of an unauthorized broadcast,** the security receiver having an antenna separate from the master station, and **wherein the evaluation computer receives the correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station** (independent claim 17)

a security receiver and an evaluation computer cooperating to monitor the broadcast of the correction message by the master station, **to also monitor other broadcasts in the area for unauthorized broadcasts having a similar character as the correction message broadcast by the master station, and to output an alert signal upon detection of an unauthorized broadcast,** the security receiver positioned remotely from the master station, and **wherein the evaluation computer receives the correction message**

output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station (Independent claim 33)

**monitoring the broadcast between the master station of the local area augmentation system and the LAAS receiver for unauthorized broadcasts in the area having a similar character as the correction message broadcast by the master station using a security receiver;
receiving the correction message output by the master station; and
outputting an alert signal when the message received by the security receiver does not match the correction message broadcast by the master station. (Independent claim 71)**

**monitoring the broadcast between the master station of the local area augmentation system and the LAAS receiver for unauthorized broadcasts in the area having a similar character as the correction message broadcast by the master station using a security receiver;
receiving the correction message output by the master station; and
outputting an alert signal when the message received by the security receiver does not match the correction message broadcast by the master station. (Independent claim 72)**

In the Office Action, the Examiner acknowledged that these references did not explicitly teach the monitoring of unauthorized broadcasts. In this regard, the following statements were provided which suggest that Applicants' inventive concepts were inherently described in these references:

"it is inherent that the monitor would receive any transmissions in the vicinity",

"As the monitor monitors the correctness of data before and after

transmission, it is inherent that it the monitor would receive any transmission in the vicinity”,

“The purpose of any monitoring system is to detect errors and provide knowledge of such errors to the users/system. As such the notifications meet the scope of the alert.”

As the Examiner is aware, for a feature of an invention to be “inherent” in a reference, inherency requires the feature to be “necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” See MPEP § 2131.01

As discussed above, it is Applicants’ position that FAA-E-2973A, Swider et al. and Murphy all discuss monitoring of the broadcast for purposes of error correction and data integrity. It is also Applicants’ position that the monitoring of unauthorized broadcasts having a similar character as the correction message broadcast by the master station, as recited in independent claims 1, 17 and 33 is not “necessarily present” in these references. If the Examiner knows of any specific teaching within any of these references that illustrate that “the monitoring of unauthorized broadcasts having a similar character as the correction message broadcast by the master station” is necessarily present in these references, then Applicants’ attorney would appreciate the Examiner noting the location of such teachings within these references.

In light of the foregoing, it is Applicants’ position that claims 1-9, 12-25, 28-41, 44-48 and 71-72 are not anticipated within the meaning of 35 USC § 102.

Therefore, reconsideration and withdrawal of the rejection of claims 1-9, 12-25, 28-41, 44-48 and 71-72 is respectfully requested.

Rejections under 35 USC §103(a)

Claims 1-72 were rejected under 35 USC § 103(a) as being obvious over Franke et al. in view of Lamb or Wullschleger et al.

As discussed above, claims 10, 11, 26, 27, 42, 43 and 49-70 have been cancelled. Thus, the foregoing rejections have been rendered moot for these claims.

In support of the rejection, the Examiner stated that “Franke et al teach an airport surveillance system for terrestrial navigation and landing systems in which the navigational signals are received and evaluated by a ground based control facility,” and that although Franke et al is not specific to LAAS, “[e]ach of Lamb and Wullschleger et al teach the conventionality of a Local Area Augmentation System in the vicinity of an airport.” As such, the Examiner concludes that “it would have been obvious to one having ordinary skill in the art to modify Franke et al by providing the services of an LAAS system to aid in navigating the aircraft in the vicinity of the airport. The combination of Franke et al and either one of Lamb or Wullschleger et al suggest the use of LAAS for precision navigation of aircraft in the vicinity of an airport as well as the monitoring of transmission in said vicinity that would affect the ground based services thereof.”

While Franke et al. may teach a surveillance system for terrestrial navigational and airport landing systems, it is the Applicants' position that Franke et al. does not teach a system having "a security receiver and an evaluation computer cooperating to monitor the broadcast of the correction message by the master station", "to also monitor other broadcasts in the area for unauthorized broadcasts having a similar character as the correction message broadcast by the master station", "to output an alert signal upon detection of an unauthorized broadcast", and "wherein the evaluation computer receives the correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station", as recited in independent claims 1, 17, and 33. Similarly, it is also Applicant's position that Franke et al. does not teach "monitoring the broadcast between the master station of the local area augmentation system and the LAAS receiver for unauthorized broadcasts in the area having a similar character as the correction message broadcast by the master station using a security receiver", "receiving the correction message output by the master station", and "outputting an alert signal when the message received by the security receiver does not match the correction message broadcast by the master station" as recited in independent claims 71 and 72.

More particularly, Franke et al. does not teach a master station

broadcasting a correction message. Rather, Franke et al. teaches that a transmitting antenna of the airport landing system is used to transmit to the aeroplane the landing signals needed for landing, such as approach heading and/or angle of approach (see col. 3, lines 25-31). Further, Franke et al. does not teach that a evaluation computer receives this correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station. Rather, Franke et al. teaches that the signals transmitted to a central evaluating unit from receiving stations are processed in such a way that the central evaluating unit is supplied with the information needed for position fixing and for classification (see col. 4, lines 9-13), and then the central evaluating unit decides whether the disturbances found are of an intensity and type likely to disrupt the proper reception and evaluation of the wanted signal (see col. 4, lines 57-62).

Furthermore, Franke et al. does not teach that the evaluation computer is implemented in the security receiver, as recited in dependent claims 12, 28, and 44. Rather, Franke et al. teaches that the receiving stations are individually linked to the central evaluating unit to enable the geographical allocation of the output signals of the outputs to be readily performed by means of the respective connections (see col. 4. Lines 17-20).

While Lamb and Wullschleger et al. may discuss LAAS systems, neither

appear to meet these deficiencies in Franke et al. Therefore, Franke et al., alone or in combination with either Lamb and Wullscleger, does not teach or suggest “a security receiver and an evaluation computer cooperating to monitor other broadcasts in the area for unauthorized broadcasts... wherein the evaluation computer receives the correction message output by the master station and determines that an unauthorized broadcaster exists when the message received by the security receiver does not match the correction message broadcast by the master station”, as recited in independent claims 1, 17, and 33, and also does not teach or suggest “receiving the correction message output by the master station” and “outputting an alert signal when the message received by the security receiver does not match the correction message broadcast by the master station”, as recited in independent claims 71 and 72.

In light of the foregoing, it is Applicants' position that claims 1-9, 12-25, 28-41, 44-48, and 71-72 are not obvious within the meaning of 35 USC § 103. Therefore, reconsideration and withdrawal of the rejection of claims 1-9, 12-25, 28-41, 44-48, and 71-72 is respectfully requested.

SUMMARY

In view of the above, Applicants respectfully submits that this application, as now amended, is in condition for allowance for the reasons stated above. Therefore, it is requested that the Examiner reconsider each and every rejection as applicable to the claims now pending and issue a Notice of Allowance thereof.

This is intended to be a complete response to the Office Action mailed February 2, 2005. Should the Examiner have any questions regarding this Amendment, or the remarks contained herein, Applicant's attorney would welcome the opportunity to discuss such matters with the Examiner.

Respectfully submitted,



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